

What is Claimed is:

1. A Light Emitting Diode (LED) illuminating module, comprising:

a supporting frame having a top surface and an elongated reflective channel indented on said top surface and defining a peripheral reflective wall inclinedly extended
5 from a bottom wall of said reflective channel; and

an illumination unit comprising a light circuit supported by said supporting frame and a plurality of illuminators which are electrically mounted to said light circuit and spacedly aligned along said reflective channel, wherein each of said illuminators forms as a point of light source for radially emitting light towards said reflective wall,
10 such that said reflective wall is adapted for reflectively accumulating said lights of said illuminators within said reflective channel, so as to merge said points of light source to form a line of light source along said reflective channel.

2. A LED illuminating module, as recited in claim 2, wherein said reflective wall is continuously extended to surround said reflective channel as a peripheral sidewall
15 thereof to reflectively accumulate said lights of said illuminators within said reflective channel.

3. A LED illuminating module, as recited in claim 1, wherein said reflective wall has a reflective inclination angle corresponding with a projecting angle of each of said illuminators.

20 4. A LED illuminating module, as recited in claim 2, wherein said reflective wall has a reflective inclination angle corresponding with a projecting angle of each of said illuminators.

5. A LED illuminating module, as recited in claim 1, wherein said reflective inclination angle of said reflective wall is larger than 90° and smaller than 120° with
25 respect to said bottom wall of said reflective channel.

6. A LED illuminating module, as recited in claim 3, wherein said reflective inclination angle of said reflective wall is larger than 90° and smaller than 120° with respect to said bottom wall of said reflective channel.

5 7. A LED illuminating module, as recited in claim 4, wherein said reflective inclination angle of said reflective wall is larger than 90° and smaller than 180° with respect to said bottom wall of said reflective channel.

8. A LED illuminating module, as recited in claim 1, wherein said bottom wall of said reflective channel is a flat surface adapted for reflectively accumulating said lights from said illuminators within said reflective channel, so as to enhance said points
10 of light source to be merged to form said line of light source along said reflective channel.

9. A LED illuminating module, as recited in claim 5, wherein said bottom wall of said reflective channel is a flat surface adapted for reflectively accumulating said lights from said illuminators within said reflective channel, so as to enhance said points
15 of light source to be merged to form said line of light source along said reflective channel.

10. A LED illuminating module, as recited in claim 6, wherein said bottom wall of said reflective channel is a flat surface adapted for reflectively accumulating said lights from said illuminators within said reflective channel, so as to enhance said points
20 of light source to be merged to form said line of light source along said reflective channel.

11. A LED illuminating module, as recited in claim 1, further comprising a sealing housing sealedly mounted below said supporting frame to define a receiving cavity therewithin to sealedly receive said light circuit, such that when each of said
25 illuminators is spacedly supported at said sealing housing to electrically connect with said light circuit, a head portion of said illuminator is outwardly protruded from said top surface of said supporting frame to dispose within said reflective channel

12. A LED illuminating module, as recited in claim 8, further comprising a sealing housing sealedly mounted below said supporting frame to define a receiving
30 cavity therewithin to sealedly receive said light circuit, such that when each of said

illuminators is spacedly supported at said sealing housing to electrically connect with said light circuit, a head portion of said illuminator is outwardly protruded from said top surface of said supporting frame to dispose within said reflective channel.

13. A LED illuminating module, as recited in claim 9, further comprising a
5 sealing housing sealedly mounted below said supporting frame to define a receiving cavity therewithin to sealedly receive said light circuit, such that when each of said illuminators is spacedly supported at said sealing housing to electrically connect with said light circuit, a head portion of said illuminator is outwardly protruded from said top surface of said supporting frame to dispose within said reflective channel.

10 14. A LED illuminating module, as recited in claim 10, further comprising a sealing housing sealedly mounted below said supporting frame to define a receiving cavity therewithin to sealedly receive said light circuit, such that when each of said illuminators is spacedly supported at said sealing housing to electrically connect with said light circuit, a head portion of said illuminator is outwardly protruded from said top
15 surface of said supporting frame to dispose within said reflective channel.

15. A LED illuminating module, as recited in claim 11, wherein said supporting frame further has a light reflective layer coated on said peripheral side wall and said bottom wall of said supporting frame to form said reflective channel.

16. A LED illuminating module, as recited in claim 12, wherein said
20 supporting frame further has a light reflective layer coated on said peripheral side wall and said bottom wall to form said reflective channel.

17. A LED illuminating module, as recited in claim 13, wherein said supporting frame further has a light reflective layer coated on said peripheral side wall and said bottom wall to form said reflective channel.

25 18. A LED illuminating module, as recited in claim 14, wherein said supporting frame further has a light reflective layer coated on said peripheral side wall and said bottom wall to form said reflective channel.

19. A LED illuminating module, as recited in claim 15, wherein said supporting frame further has a plurality of guiding through holes spacedly formed on said top surface such that said head portions of said illuminators are protruded from said receiving cavity of said sealing housing to said reflective channel through said guiding through holes respectively so as to retain said illuminators in position.

20. A LED illuminating module, as recited in claim 16, wherein said supporting frame further has a plurality of guiding through holes spacedly formed on said top surface such that said head portions of said illuminators are protruded from said receiving cavity of said sealing housing to said reflective channel through said guiding through holes respectively so as to retain said illuminators in position.

21. A LED illuminating module, as recited in claim 17, wherein said supporting frame further has a plurality of guiding through holes spacedly formed on said top surface such that said head portions of said illuminators are protruded from said receiving cavity of said sealing housing to said reflective channel through said guiding through holes respectively so as to retain said illuminators in position.

22. A LED illuminating module, as recited in claim 18, wherein said supporting frame further has a plurality of guiding through holes spacedly formed on said top surface such that said head portions of said illuminators are protruded from said receiving cavity of said sealing housing to said reflective channel through said guiding through holes respectively so as to retain said illuminators in position.